WHAT IS CLAIMED IS:

1. In a network of affiliated CPUs, a method for managing the workload of said CPUs comprising the steps of:

(a) distributing a workload of applications across a number N of affiliated CPUs where "N" may range from a subset group "Sg" of CPUs to the total number TN of all CPU's in said network;

(b) specifying a selected subset group of said CPUs to be utilized for processing while those CPUs not in the selected subset group are left unaffected.

2. Th method of claim 1 wh rein step (a) includes the step of:

(a1) allocating the percentage of utilization of total workload that will be executed by each CPU in the selected subset group.

3. The method of claim 2 wherein step (a1) includes the steps of:

(a1a) calculating a Work Quantum (WQ) for each utilized CPU which indicates the work completion per unit time for each CPU;

(a1b) determining when sufficient Work Quantum (WQ) have been accomplished to complete the total workload.

4. The method of claim 1 wherein step (b) includes the steps of:

(b1) generating a total processor load (TL) on a subset of CPUs in a network of N total CPUs;

(b2) establishing an input parameter for those utilized CPUs which establishes a percentage of the resources to be used as a portion of the total n twork resourc s.

5. In a network of affiliated processors (CPUs), a system for selecting a chosen group or all of said processors (CPUs) for utilization to process a total workload comprising:

(a) means for selecting the utilization of a group of "X" processors (CPUs) where X is less than or equal to the total number "TN" of processors (CPU) in the said network;

(b) means to distribute the total workload among the selected group of utilized processors (CPUs);

(c) means to allocate the percentage of the total work which is to be allocated to each of said utilized processors (CPUs) in said selected group;

(d) means to count the processing work completed by each processor (CPU) in said utilized group of processors (CPUs);

(e) means to determine when said total workload is fully completed.

6. Th system of claim 5 wher in said means (c) to allocate said total workload includ s:

(c1) means to determine how many processor (CPU) operations are required to generate a workload of "P" percent on each processor (CPU) in the selected utilized group of processors (CPUs);

(c2) means for starting a process thread on each processor of said selected utilized group of processors (CPUs);

(c3) means for calculating the amount of work (MYWORK) that each processor (CPU) must do to enable completion of the Total Workload utilizing all of the selected utilized processors (CPUs);

(c4) means for counting the completed workload of each processor (CPU) until the total workload has been processed.

7. The system of claim 6 wherein said means (c3) for calculating MYWORK includes:

(c3a) means to determine the minimum time "M" for one utilized processor (CPU) to accomplish one work unit (WU);

(c3b) means to determine the number of work units (WU) that each utilized processor can x cute in one second;

(c3c) means to calculate the number of work units (WU) per second needed to execute the total workload (TW);

(c3d) means, operating in parallel, to start one process thread on each one of the selected utilized processors (CPUs);

(c3e) means to determine the amount of work each thread should do during a selected 0.1 to 1 sec time period designated as the Time Quantum (TQ) to generate the required workload for that processor (CPU) carrying the thread;

(c3f) means to derive a Work Quantum (WQ) for each utilized processor (CPU) where:

$$WQ = MYWORK \times TQ;$$

(c3g) means to indicate when the Work Quantum (WQ) completed has matched the total workload.

8. In a system of multiple processors, a method for allocating the workload of application processing to a selected group of processors comprising the steps of:

(a) determining the total number of processors in said system;

(b) specifying the percentage of the total system processor resources to be consumed and designating this as an input parameter;

(c) specifying the subset group of processors that will be utilized to handle applications;

(d) setting each of the processors in said selected group to operate at an equal share of the selected input parameter, that is, the total workload divided by the number of processors selected for the utilized subset of processors (CPUs);

(e) setting the minimum time "M" for each processor's (CPUs) local work units to a large number "L" of microseconds where "M" designates the time for one processor to perform one local work unit;

(f) establishing the time "T" that it takes to perform one processor (CPU) local work unit on any of the processors (CPUs) in the utilized subset of processors (CPUs);

(g) repeating steps (e) and (f) until a consistent average minimum value "M" is obtained;

(h) determining the number of each processor's (CPU's) local work units that can be accomplished by each utilized processor (CPU) per second;

(i) calculating the number of work units per second (w/sec) needed to equal the total workload placed on the system;

(j) allocating one thread of an ongoing application to each member CPU of the utilized processor (CPU) subset;

(k) calculating how much work each of the utilized processors must do by dividing the number of work units/sec (w/sec) by the number of utilized processors (CPUs) where this value is designated MYWORK;

(l) choosing a time quantum (TQ) between 0.1 and 1.0 seconds;

(m) determining the amount of work each process thread should do in the time period "TQ" by multiplying the value of MYWORK by the chosen time quantum (TQ) thus to allocate the required workload for each of the utilized processors where the value of MYWORK*TQ is designated as the work quantum (WQ);

(n) performing, by each utilized processor (CPU), of the work units (MYWORK) established for each processor (CPU);

(o) checking to se that each processor (CPU) has accomplished its designated work quantum (WQ);

(p) utilizing a "Work-Quantum Completed" Counter, shared by all the utilized processors (CPUs), to update each set of (1WQ) of work units completed by a utilized processor (CPU);

(q) checking said "WQ" Completed Counter to indicate that the work Quantum (WQ) completed value indicates that all the ongoing applications involved have been fully processed.